

ABSTRACT

A method is provided of forming an integrated circuit with a semiconductor substrate that is doped with a set concentration of an oxidizable dopant of a type that segregates to the top surface of a silicide when the semiconductor substrate is reacted to form such a silicide.

- 5 A gate dielectric is formed on the semiconductor substrate, and a gate is formed on the gate dielectric. Source/drain junctions are formed in the semiconductor substrate. A silicide is formed on the source/drain junctions and dopant is segregated to the top surface of the silicide. The dopant on the top surface of the segregated dopant is oxidized to form an insulating layer of oxidized dopant above the silicide. An interlayer dielectric is deposited
- 10 above the semiconductor substrate. Contacts and connection points are then formed in the interlayer dielectric to the insulating layer of oxidized dopant above the silicide.